IN THE SPECIFICATION

(At page 3, paragraph 5)

A first aspect of the present invention is a bedding for a utility line. The bedding consists of an elongate trench formed in the earth. A filter fabric wrap is provided lining a lengthwise segment of the trench, with the lengthwise segment having a select length. A first select depth of a porous particulate material resting on a trench bottom underlies a non-perforated utility line being installed and supports the non-perforated utility line in the lengthwise segment. A second select depth of porous particulate material overlies the non-perforated utility line in the lengthwise segment. The length of the lengthwise segment, the first select depth and the second select depth are selected to store a select volume of water.

(At page 4, paragraph 2)

A conduit may be included providing liquid communication between a source of water and the lengthwise segment of the trench. A perforated pipe may be provided overlying the non-perforated utility line in the lengthwise segment, with the perforated pipe being in fluid communication with the conduit. The source of water may be a bioretention facility consisting of an engineered planting medium overlying a water collection structure, with the surface of the engineered planning medium supporting growing plants. The collection structure is in liquid communication with the conduit. The collection structure may consist of a perforated pipe within a porous particulate material bed, the perforated pipe being in liquid communication with the conduit. The porous particulate material of the bedding may be a gravel, preferably a clean graded gravel.

(At page 4, paragraph 3)

A second aspect of the present invention is a surface water retention and dissipation structure. The surface water retention and dissipation structure includes a catch basin configured to collect surface water run-off and an elongate trench formed in the earth. A filter fabric wrap lines a lengthwise segment of the trench, the lengthwise segment having a select length. A first select depth of porous particulate material rests on a trench bottom underlying a non-perforated utility line of the lengthwise segment. A second select depth of porous particulate a material

overlies the non-perforated utility line in the lengthwise segment. The filter fabric wrap surrounds the porous particulate material. A conduit is in liquid communication between the catch basin and the lengthwise segment. The select length of the lengthwise segment, the first select depth and the second select depth are selected to store a select volume of water received from the catch basin. A perforated pipe may be provided overlying the non-perforated utility line in the lengthwise segment and the perforated pipe is in liquid communication with the conduit. The first select depth is preferably sufficient to communicate the bottom of the trench with a water table underlying the trench. Alternatively, a drainage well may be provided in liquid communication between a water table underlying the trench and the bottom of the trench. A bioretention facility may also be provided in liquid communication with the lengthwise segment. The bioretention facility includes an engineered planting medium overlying a water collection structure, with the surface of the engineered planning medium supporting growing plants and the collection structure being in liquid communication with the conduit. The water collection structure of the bioretention facility preferably consists of a perforated pipe within a porous particulate material bed, the perforated pipe being in liquid communication with the conduit.

(At page 5, paragraph 2)

A third aspect of the present invention is a method of constructing a utility line bedding for water management, the utility line bedding being configured to contain a select volume of water to be dissipated. As a first step of the method a volume of water to be dissipated is determined. Next, a utility line trench is excavated in the earth at a width sized to receive a non-perforated utility line of a given outer diameter therein. As part of the trench formation a lengthwise segment of the trench is excavated to a select segment length and a lengthwise segment depth. The lengthwise segment of the trench is lined with a filter fabric wrap. A base of porous particulate material is provided on the bottom of the trench to a first select depth in the lengthwise segment of the trench. The non-perforated utility line is laid upon the base. A cover of porous particulate material having a second select depth is provided over the non-perforated utility line. The first select depth, the second depth and the select length of the lengthwise segment of the trench are selected to define a sufficient volume of void space in the porous particulate material to hold the select volume of water to be displaced. The method may further

include providing liquid communication between the bottom of the lengthwise segment and a water table underlying the lengthwise segment. The liquid communication may be provided by excavating the lengthwise segment to a depth sufficient for the trench bottom to lie below the surface of an underlying water table. A perforated pipe is preferably provided in the cover of the particulate material over the non-perforated utility line in the lengthwise segment with the perforated pipe being in liquid communication with the source of water to be dissipated.

(At page 5, paragraph 3)

The bedding for utility ~~pipe~~line, the water retention and dissipation structure and the method of constructing a utility line bedding for water management of the present invention each address the problem of dissipating excess water from flood prone areas adjacent to an installation site of a utility line. By utilizing a modified trench excavated for installation of the utility line, the present invention minimizes the cost of building the water storage and dissipating structure. At most, marginal increases in costs result from the expenses associated with excavating the utility line deeper than might otherwise be required, the porous particulate matter (e.g., gravel) necessary to fill the trench and the filter fabric wrap encasing the porous particulate material. Where a bioremediation facility is desired, additional costs may be involved. Dissipation of water received in the structure can be significantly enhanced by bringing the elongate portion of the trench forming the retention structure into fluid communication with an underlying water table. This can be achieved most cost effectively simply by excavating the trench sufficiently deep so that the trench bottom resides within the water table, preferably more than a foot under the water table level. Where the water table is too deep to be excavated to, a drainage well can be drilled from the bottom of the trench to the underlying water table to bring the water table into liquid communication with the trench bottom. Because of the marginal costs associated with building the storm water dissipation structure of the present invention, relief from annoying flooding can be afforded residents of rapidly developing areas without the huge expenses associated with constructing new or enlarged storm sewers or contending with the environmental concerns related to the direct discharge of stormwater run-off into surface waters. In coastal communities where saltwater intrusion is a concern this approach also has the benefit of reducing loss of rainwater to tide and thus helps combat salt-water intrusion into surficial aquifers.. Furthermore, the method and structures of the present invention require only a single tear up of

affected roads and sidewalks, significantly decreasing both the expense and the inconvenience to residents while still effectively addressing annoying and potentially dangerous flooding problems. The addition of a bioretention facility, removes pollutants in the stormwater in the runoff that is released to the water table.